UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 February 2007*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,11-23,25-29 and 31-37* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-8,11-23,25-29 and 31-37* is/are rejected.
7)☒ Claim(s) *9,10,24 and 30* is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Reopened

1.   In view of the Appeal Brief filed on 4/18/2006, PROSECUTION IS HEREBY

REOPENED. New grounds of rejection are set forth below. To avoid abandonment of

the application, appellant must exercise one of the following two options:

        (1) file a reply under 37 CFR 1.111 as (if this Office action is non-final) or a reply

under 37 CFR 1.113 (if this Office action is final); or,

                (2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31

followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal

fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees

set forth in 37 CFR 41.20 have been increased since they were previously paid, then

appellant must pay the difference between the increased fees and the amount

previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by

signing below:

/Charles Rones/

Supervisory Patent Examiner, Art Unit 2164

2.   Claims *1-8,11-23,25-29 and 31-37* are pending in this Office Action.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of

making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

art to which it pertains, or with which it is most nearly connected, to make and use the same and shall

set forth the best mode contemplated by the inventor of carrying out his invention.

4.   Claims 26-33, 35 and 36 are rejected under 35 U.S.C. 112, first paragraph, as

failing to comply with the enablement requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to enable one skilled in

the art to which it pertains, or with which it is most nearly connected, to make and/or use

the invention. As per the specification on page 29 line 2-27 does not support the **first

word stack, second word stack and third word stack as well as first handwriting

recognizer, second handwriting recognizer**. Applicant attempted to add specification

to overcome the rejection and Examiner made it clear in the previous Office Action that

the new matter cannot be added to the specification to overcome the rejection.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set

forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims

under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was

commonly owned at the time any inventions covered therein were made absent any evidence to the

contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and

invention dates of each claim that was not commonly owned at the time a later invention was made in

order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e),

(f) or (g) prior art under 35 U.S.C. 103(a).

6.   Claims 1-7, 12, 16, 19-22, 34 and 36 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Syeda-Mahmood (US Patent 5,953,451) hereinafter Mahmood,

in view of Tran (US Patent 6,202,060) hereinafter Tran.

7.   As per independent claims 1, 34 and 36, Mahmood teaches the claimed,

"creating a document stack from at least one word in a handwritten document" (stack as

index) (Fig. 4, col. 7, lines 35-39). Mahmood does not explicitly teach creating a query

stack. However, Tran teaches the claimed step of "creating a query stack from a query"

as NBS will use the existing query (Fig. 1, col. 10, lines 11-16). Thus, it would have

been obvious to one of ordinary skill in the art at the time of the invention, to have

combined the teachings of the cited references because Tran's teachings would have

allowed Mahmood's method to provide a spreadsheet and a database on a portable

computer which accepts data from an input recognizer which includes a non-cursive

handwriting recognizer or a speech recognizer (col. 2, lines 52-55). Mahmood teaches

the claimed step of "determining a measure between the document stack and the query

stack" (Fig. 4, col. 7, lines 43-47).

Tran also teaches the other limitations of claims 34 and 36, " processor and

computer readable medium" as the processor is connected to ROM and RAM (Fig. 1,

col. 5, lines 12-27).

8.   As per dependent claim 2, Tran teaches the claimed step of "the at least one

word comprises a plurality of words, the document stack corresponds to one of the

plurality of words in the handwritten document, the query comprises a plurality of query

words and at least one operator, the query stack corresponds to one of the plurality of

query words, and the step of determining a measure farther comprises the step of, for

each query stack, determining a measure between the query stack and each document

stack in the handwritten document" as query will have at least an operator (Fig. 1,

col. 10, lines 20-23).

9.   As per dependent claims 3 and 19, Mahmood, teaches the claimed step of "each

document stack comprises a plurality of document scores, and wherein the method

further comprises the step of optimizing each of the document scores for the document

stacks" (Fig. 4, col. 7, lines 49-51).

10.   As per dependent claims 4 and 20, Mahmood, teaches the claimed step of "the

measure quantifies an amount of similarity between the document stack and the query

stack" (Fig. 7, col. 8, lines 38-41).

11.   As per dependent claim 5, Tran teaches the claimed step of "the query is

handwritten, typewritten, or partially handwritten and partially typewritten" the processor

accepts handwritings as an input medium from the user (Fig. 1, col. 10, lines 17-18).

12.   As per dependent claims 6 and 21, Tran teaches the claimed step of "the query

is typewritten, and wherein the step of creating a query stack comprises creating a

query stack for each query word of the query, wherein each query stack comprises a

corresponding word from the query and an associated high word score for this word,

and wherein each query stack comprises a plurality of other words having zero word

scores associated therewith" (Fig. 1, col. 10, lines 17-18).

13.   As per dependent claims 7 and 22, Mahmood teaches the claimed, "the query is

typewritten, and wherein the step of creating a query stack comprises creating a query

stack for each query word of the query, wherein each query stack comprises a

corresponding word from the query and an associated high word score for this word,

and wherein each query stack comprises at least one other word having a small word

score associated therewith" (col. 5, lines 63-65).

14.   As per dependent claim 12, Mahmood teaches the claimed, "the step of

determining a document score for the handwritten document by using the measure"

(col. 6, lines 3-6).

15.   As per independent claim 16, Mahmood teaches the claimed step of "selecting a

handwritten document from the set of handwritten documents" (stack as index) (Fig. 4,

col. 7, lines 35-39). Mahmood does not explicitly teach creating a query stack.

However, Tran teaches the claimed step of "creating at least one query stack from a

query comprising one or more words, wherein each word is handwritten or typed" as at

step 504 in the event the responsive documents have been located the agent checks for

other agents to call for and at step will respond to the handwritten documents and

intelligently performs the requested action (Fig. 22, col. 31, line 66 to col. 32, line 16).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the

invention, to have combined the teachings of the cited references because Tran's

teachings would have allowed Mahmood's method to provide a spreadsheet and a

database on a portable computer which accepts data from an input recognizer which

includes a non-cursive handwriting recognizer or a speech recognizer (col. 2,

lines 52-55). Further, Tran teaches the claimed step of "selecting a handwritten

document from the set of handwritten documents" as pre-selector receives the output

and queries of the voice feature extractor and queries the dictionary to compile (Fig. 1,

col. 15, lines 42-45). Tran teaches the claimed step of "selecting a document stack from

the selected handwritten document" as pre-selector receives the output and queries of

the voice feature extractor and queries the dictionary to compile (Fig. 1, col. 15,

lines 42-45). Further, Tran teaches the claimed step of "selecting the subset of

handwritten documents for display by using the document scores" as a display LCD

panel is provided to capture the3 handwriting (Fig. 1, col. 10, 17-23). Mahmood

teaches the claimed step of "determining a measure between the at least one query

stack and the selected document stack" (Fig. 4, col. 7, lines 43-47). Mahmood teaches

the claimed step of "scoring each of the handwritten documents in the set of handwritten

documents by using the query and the measures, thereby creating a number of

document scores" (col. 6, lines 3-6).

16.   Claims 8, 11, 13-15, 17-18, 23, 25 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Syeda-Mahmood (US Patent 5,953,451) hereinafter Mahmood, in

view of Tran (US Patent 6,202,060) hereinafter Tran, and in view of Keith (US Patent

6,629,097).

17.   As per dependent claims 8 and 23, Mahmood and Tran do not explicitly teach

any scoring methods.   However, Keith teaches "the measure is selected from the group

consisting of a dot product measure, an Okapi measure, a score-based keyword

measure, a rank-based keyword measure, a measure using n-grams, and a measure

using edit distances" (col. 20, lines 20-26). Thus, it would have been obvious to one of

ordinary skill in the art at the time of the invention, to have combined the teachings of

the cited references because Keith's teachings would have allowed Mahmood's method

for extracting inherent and implicit conceptual relationships and semantic associations

existing among items in a data set (col. 16, lines 12-14).

18.   As per dependent claims 11 and 25, Mahmood and Tran do not explicitly teach

any scoring methods. However, Keith teaches "each of the query and document stacks

comprises a plurality of words, wherein the measure uses edit distances to compare

words in the query stack to words in the document stack" (col. 20, lines 20-26). Thus, it

would have been obvious to one of ordinary skill in the art at the time of the invention, to

have combined the teachings of the cited references because Keith's teachings would

have allowed Tran's method for extracting inherent and implicit conceptual relationships

and semantic associations existing among items in a data set (col. 16, lines 12-14).

19.   As per independent claim 13, Mahmood teaches the claimed step of "creating a

document stack from at least one word in a text document" (Fig. 22, col. 31 line 66 to

col. 32, line 16). Further, Tran teaches the claimed step of "creating a query stack from

a query" as NBS will use the existing query (Fig. 1, col. 10, lines 11-16). Thus, it would

have been obvious to one of ordinary skill in the art at the time of the invention, to have

combined the teachings of the cited references because Tran's teachings would have

allowed Mahmood's method to provide a spreadsheet and a database on a portable

computer which accepts data from an input recognizer which includes a non-cursive

handwriting recognizer or a speech recognizer (col. 2, lines 52-55).

Mahmood teaches the claimed step of "determining a measure between the document stack and the query stack" (Fig. 4, col. 7, lines 43-47). Mahmood and Tran do not explicitly teach scoring the based on the measure. However, Keith teaches the claimed step of "scoring the documents based on the measure, thereby creating a document score" (col. 20, lines 20-26). Keith teaches the claimed step of "displaying each document whose document score meets a predetermined threshold" (col. 25, lines 30-39). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention, to have combined the teachings of the cited references because Keith's teachings would have allowed Mahmood's method for extracting inherent and implicit conceptual relationships and semantic associations existing among items in a data set (col. 16, lines 12-14).

20.   As per dependent claim 14, Tran teaches the claimed step of "the query is a handwritten query" as at step 504 in the event the responsive documents have been located the agent checks for other agents to call for and at step will respond to the handwritten documents and intelligently performs the requested action (Fig. 22, col. 31 line 66 to col. 32, line 16).

21.   As per dependent claim 15, Tran teaches the claimed step of "the query is a typewritten query" as at step 504 in the event the responsive documents have been located the agent checks for other agents to call for and at step will respond to the

handwritten documents and intelligently performs the requested action (Fig. 22, col. 31 line 66 to col. 32, line 16).

22.   As per dependent claim 17, Mahmood and Tran do not explicitly teach scoring the based on the measure. However, Keith teaches the claimed step of "the step of selecting handwritten documents that are above a predetermined threshold" as threshold of entities (col. 25, lines 25-36). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention, to have combined the teachings of the cited references because Keith's teachings would have allowed Mahmood's method for extracting inherent and implicit conceptual relationships and semantic associations existing among items in a data set (col. 16, lines 12-14).

23.   As per dependent claim 18, Mahmood and Tran do not explicitly teach scoring the based on the measure. However, Keith teaches the claimed step of "the predetermined threshold is selected from the group consisting of a rank threshold and a score threshold" as percentage threshold of entities which must be associated with a given term (col. 25, lines 25-36). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention, to have combined the teachings of the cited references because Keith's teachings would have allowed Mahmood's method for extracting inherent and implicit conceptual relationships and semantic associations existing among items in a data set (col. 16, lines 12-14).

24.   Claims 26-33, 35 and 37 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Tran (US Patent 6,202,060) hereinafter Tran, and in view of Platt et

al. (US Patent 5,812,698) hereinafter Platt.

25.   As per independent claims 26, 35 and 37, Tran teaches the claimed "creating a

first word recognition stack, by using a first handwriting recognizer, from at least one

word, creating a second word recognition stack, by using a second handwriting

recognizer, from the at least one word and comparing the first and second word

recognition stacks with a third word recognition stack to determine whether a

handwritten document should be retrieved" as at step 504 in the event the responsive

documents have been located the agent checks for other agents to call for and at step

will respond to the handwritten documents and intelligently performs the requested

action (Fig. 22, col. 31 line 66 to col. 32, line 16). Tran does not explicitly teach using a

handwriting recognizer. However, Platt teaches handwriting recognizing system using

the input device as tablet on which characters are formed using a pen-like stylus (Fig. 1,

col. 3, line 66 to col. 4, line 3). Thus, it would have been obvious to one of ordinary skill

in the art at the time of the invention, to have combined the teachings of the cited

references because Platt's teachings would have allowed Tran's method for recognizing

handwriting characters which will enable recognizing a wide variety of handwriting styles

(col. 2, lines 36-38). Tran also teaches the other limitations of claims 35 and 37, "

processor and computer readable medium" as the processor is connected to ROM and

RAM (Fig. 1, col. 5, lines 12-27).

26.   As per dependent claim 27, Platt teaches the claimed "the at least one word is at

least one handwritten word from the handwritten document, the first word recognition

stack comprises a first document stack, the second word recognition stack comprises a

second document stack and the third word stack is a query stack determined from at

least one query word" the expert system's set of rules (Fig. 20, col. 20,lines 37-47).

27.   As per dependent claim 28, Tran teaches the claimed "the at least one word is at

least one word from a query; the first word recognition stack comprises a first query

stack, the second word recognition stack comprises a second query stack, and the third

word recognition stack is a document stack determined from at least one handwritten

word in the handwritten document" as NBS will use the existing query (Fig. 1, col. 10,

lines 11-16).

28.   As per dependent claim 29, Platt teaches the claimed "configuring a handwriting

recognizer into a first configuration to create the first handwriting recognizer and

configuring the handwriting recognizer into a second configuration to create the second

handwriting recognizer, wherein the first and second configuration are different" (Fig. 9,

Table 1, col. 10, lines 15-42).

29.   As per dependent claim 31, Tran teaches the claimed "merging the first and

second word recognition stacks to create a fourth word recognition stack that is

compared with the third word recognition stack" as NBC will use the existing query

(Fig. 1, col. 10, lines 16).

30.   As per dependent claim 32, Platt teaches the claimed "the first handwriting

recognizer has a first configuration, wherein the second handwriting recognizer has a

second configuration, and wherein the first and second configurations are different"

(Fig. 16, col. 16, line 26-64).

31.   As per dependent claim 33, Platt teaches the claimed "the first configuration

comprises a configuration caused by selecting a constraint from the group consisting

essentially of an uppercase letter constraint, a lowercase letter constraint, a recognize

digits constraint, a language constraint, a constraint wherein characters and words are

recognized only if in a vocabulary, and a constraint wherein characters and words are

hypothesized when not in a vocabulary, and wherein the second configuration

comprises a configuration caused by selecting a constraint from the group consisting

essentially of an uppercase letter constraint, a lowercase letter constraint, a recognize

digits constraint, a language constraint, a constraint wherein characters and words are

recognized only if in a vocabulary, and a constraint wherein characters and words are

hypothesized when not in a vocabulary" (Fig. 16, col. 16, line 41-64).

Allowable Subject Matter

32.   Claims 9-10, 24, 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

33.   Applicant's arguments in the Appeal Brief filed on 2/16/2006 have been fully considered but they are moot in view of the new grounds of rejection

Conclusion

34.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sathyanarayan Pannala whose telephone number is (571) 272-4115. The examiner can normally be reached on 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov.

Should you have questions on access to the Private PAIR system, contact the

Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sathyanarayan Pannala/
Primary Examiner, Art Unit 2164

srp
January 21, 2009